#13 AF/2613 5-14-04



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Before the Board of Patent Appeals and Interferences

Applicants: Xavier Ducloux et al.
Serial No.: 09/819,554
Filed : March 28, 2001
For : PROCESS AND DEVICE FOR THE VIDEO CODING OF HIGH DEFINITION IMAGES
Examiner: Behrooz M. Senfi
Art Unit: 2613



BRIEF ON APPEAL

Mail Stop: Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

May It Please The Honorable Board:

This is Appellants' Brief on Appeal from the final rejection of claims 1 – 9. Please charge the $330.00 fee for filing this Brief to Deposit Account No. 07-0832. Appellants waive an Oral Hearing for this appeal.

Please charge any additional fee or credit overpayment to the above-indicated Deposit Account. Enclosed are three copies of the Brief.

## I. REAL PARTY IN INTEREST

The real party in interest of Application Serial No. 09/819,554 is the Assignee of record:

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France



**********

**Certificate of Mailing under 37 CFR 1.8**

**I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in a postage paid envelope addressed to: Mail Stop: Appeal Briefs - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.**

Signature: Patricia M. Cedarewski Date: May 5, 2004

## II. RELATED APPEALS AND INTERFERENCES

There are currently, and have been, no related Appeals or Interferences regarding Application Serial No. 09/819,554 known to the undersigned attorney.

## III. STATUS OF THE CLAIMS

Claims 1 – 9 are rejected and the rejection of claims 1 - 9 are appealed.

## IV. STATUS OF AMENDMENTS

All amendments were entered and are reflected in the claims included in Appendix I.

## V. SUMMARY OF THE INVENTION

The present claimed invention recites a process and device for the MPEG type video coding of high definition images wherein the image is split into panels and an encoder is assigned to each panel. Two or more panels constitute, over the length of the image, a horizontal band of the image. A rate control is implemented at a band level as a function of a preset bit rate for the band. Each encoder of the band takes into account a same Video Buffering Verifier (VBV) calculated for the whole band. Independent claims 1 and 7 each include similar limitations to those discussed above.

## VI. ISSUES

Whether the subject matter of claims 1, 7 and 8 are unpatentable under 35 USC 103(a) over Wu et al. (U.S. 6,573,945) in view of Mihara (U.S. 6,229,849).

Whether the subject matter of claims 2 – 5 and 9 are unpatentable under 35 USC 103(a) over Wu et al. (U.S. 6,573,945) in view of Mihara (U.S. 6,229,849) and further in view of Blawat et al. (U.S. 6,198,878).

## VII. Grouping of Claims

Claims 2 – 6 are dependent on independent claim 1. Claims 8 - 9 are dependent on independent claim 7. The claims do not stand or fall together.

## VIII. Arguments

Wu et al. (U.S. 6,573,945) when taken alone or in combination with Mihara (U.S. 6,229,849) or Blawat et al. (U.S. 6,198,878) does not render the present invention as claimed in claims 1, 7 and 8 unpatentable under 35 U.S.C. § 103(a). Also, that Wu et al. (U.S. 6,573,945) when taken alone or in any combination with Mihara (U.S. 6,229,849) and Blawat et al. (U.S. 6,198,878) does not render the present invention as claimed in claims 2-5 and 9 unpatentable under 35 U.S.C. § 103(a). Thus, reversal of the Final Rejection (hereinafter "rejection") of Claims 1- 9 is respectfully requested.

### Overview of the Cited References

Wu et al. disclose an encoder and encoding method for inserting logos into a digital television signal. The logo insertion is performed at the front end of the encoder (e.g., prior to compression) by sharing the video capture frame buffer of the encoder, so there is no need for a separate logo inserter with a separate buffer thereby reducing encoding costs. An alpha blending function receives logo image and logo alpha map data for blending with input video data. The input video is retrieved from the frame buffer, and written back to the frame buffer after blending with the logo data. Subsequently, the frame buffer contents are provided to a pre-processing function for filtering and film mode detection. For a film mode frame, a drop field decision is provided from the pre-processing function to the frame buffer to drop the redundant field. The pre-processed video data is then provided for conventional compression processing. In an HDTV embodiment, several compressors are provided which each receive a panel of a video frame.

Mihara discloses determining an upper limit of a usable range of a VBV buffer from a preset delay time of the VBV buffer and a designated bit rate. A target bit quantity of a picture (i) and a data occupancy quantity of the VBV at the time when a picture (j+1) is coded are calculated, and the target bit quantity T(j) for coding the picture (j) is corrected so that the data occupancy quantity of the VBV of the picture (j+1) constantly falls within the

limited range. By this, even when a low coding bit rate is set, the delay due to the VBV buffer of a predetermined delay time or longer does not reach a prescribed delay time or longer. Thus, an MPEG encoder suitable for a live broadcast in which the problem of delay time is not desired can be realized.

Blawat et al. disclose the use of a VBV buffer for controlling the output bit rate. The process of Blawat et al. deals with the use of only one coder. In Blawat et al., for example, for the first e.g. 80% of the total playing time an average bit rate is produced which is e.g. 95% only of the normal average bit rate. For the remaining 20% of the playing time the value for the desired average bit rate ascends to e.g. 150% of the normal value. During the first 80% the virtual buffer size is increased by a factor of e.g. 100 whereas during the last 20% the virtual buffer size descends to the normal value. Thereby an increased decoding quality can be achieved during e.g. 80% of the playing time. In the remaining playing time there is nearly no loss in the normal decoding quality.

1. **Rejection of Claims 1, 7 and 8 under 35 U.S.C. 103(a) as being unpatentable over over Wu et al. (U.S. 6,573,945) in view of Mihara (U.S. 6,229,849).**

Reversal of the rejection of claims 1, 7 and 8 under 35 U.S.C. 103(a) as being unpatentable over Wu et al. in view of Mihara is respectfully requested. The rejection makes the following crucial errors in interpreting the cited reference.

A. The rejection erroneously states that claims 1, 7 and 8 are made unpatentable by U.S. Patent 6,573,945 issued to Wu et al. in view of U.S. Patent 6,229,849 issued to Mihara.

**ISSUES**

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596, 1598 (Fed.Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (CCPA 1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion, or implication in the prior art as a whole or knowledge generally available to one having

ordinary skill in the art. *Uniroya, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed.Cir. 1988), *cert. denied*, 488 U.S. 825 (1988); *Ashland Oil Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 28, 293, 227 USPQ 657, 664 (Fed.Cir. 1985), *cert. denied,* 475 U.S. 1017 (1986); *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed.Cir. 1984). These showings by the Examiner are an essential part of complying with the burden of presenting a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed.Cir. 1992).

A principal issue here is whether or not Wu et al. or Mihara disclose or suggest a rate control being implemented at a band level as a function of a preset bit rate for the band wherein each encoder of the band taking into account a same Video Buffering Verifier (VBV) calculated for the whole band.

It is respectfully submitted that Wu et al. and Mihara neither disclose nor suggest the above feature for the following reasons. The purpose of the present claimed invention is to implement the rate control algorithm of each coder at a band level by using a same virtual buffer. This global VBV buffer takes into account global data, i.e. data concerning the whole band. The coding of the panels which make up a band is made at a band level and not at a panel level. Therefore, instead of having constraints specific to each coder, one single constraint exists for the entire band. This single constraint relates to the single Video Buffer Verifier. This constraint for the band is consecutively reduced as it is no longer an aggregation of constraints from each coder dedicated to the band (overflow can be compensated by underflow) thereby allowing improvement of the coding image quality.

Wu et al. discloses an image split (110) into panels and a processing of each panel (122) through video compressors as can be seen in Figure 1 thereof. The Master controller controls the flow of data and coordinates and synchronizes the video compressors. The Examiner states that Wu et al. fail to disclose the VBV of the present claimed invention.

Mihara discloses the use and management of a VBV buffer and statistical multiplexing of data streams coming from the programs P1, P2...Pn. This method of management allows for maintenance of a short delay when the output bit rate changes. The problem solved by Mihara relates to a live broadcast in which the delay time has to be minimized.

According to the Examiner, it would have been obvious to modify the system of Wu et al. as taught by Mihara to minimize the delay time. However, Applicants respectfully disagree with the Examiner's statement as the problem solved by the present claimed invention is not to minimize a "delay time". Rather, the purpose of the present claimed invention is the implementation of a rate control algorithm of each coder at a band level by using a single virtual buffer. Therefore, one skilled in the art would not modify the system of Wu et al. with the system taught by Mihara.

Moreover, Wu et al. relates to compressors corresponding to panels whereas Mihara relates to coders corresponding to programs. It is respectfully submitted that a man skilled in the art would not combine such documents. The data in Mihara that is being multiplexed is program data, and the data in both the present claimed invention and Wu that is multiplexed is panel data. Thus, because the data being multiplexed is different, the problem solved by each invention is different as well. Specifically, unlike the present invention as claimed in independent claims 1 and 7, neither Wu et al. nor Mihara disclose or suggest that "each encoder of the band taking into account a same Video Buffering Verifier (VBV) calculated for the whole band", meaning the control is made at a band level and not a panel or program level.

Furthermore, it would not be obvious to combine the system of Wu et al. with the system of Mihara based on the multiplexing performed in Mihara. Specifically, statistical multiplexing disclosed in Mihara manages the output rate of each encoder to get a constant or predetermined global output rate whereas VBV management manages the output rate of an encoder to avoid overflow or underflow in the corresponding buffer on the decoder side. As explained in column 11, lines 13 to 60 of Mihara, the controller 24 calculates the usable range of the VBV and the occupancy quantity. The capacity of the VBV buffer is 1.8 Mbits (see Mihara column 20, line 63) and the described VBV for statistical multiplexing corresponds to the buffer of the decoder (See Mihara column 22, lines 32-35). Thus, the problem of overflow/underflow in the buffer of the decoder relates only to the program selected on the decoder side. Mihara neither discloses nor suggests "a rate control [is] implemented at a band level" as in the present claimed invention. Mihara also neither discloses nor suggests "each encoder of the band taking into account a single Video Buffering Verifier (VBV) calculated for the whole band" as in the present claimed invention.

Applicants respectfully disagree with the Examiner's assertion that Mihara discloses the VBV as in the present claimed invention. Specifically, the abstract only teaches the management of a VBV when a bit rate change occurs and Fig.4, which was also cited by the Examiner, shows an image multiplexing system. As explained in column 8 of Mihara, the controller 3 determines the target bit rate with respect to each program Pi, by using a statistical multiplexing technique. This technique allocates the global bit rate to each program according to a complex calculation. This well-known technique of rate allocation is not based on the management of a single VBV for all the programs. Furthermore, according to the Examiner, Mihara discloses the present claimed invention in figure 6. This figure only explains the management of a VBV buffer for a given program. As discussed above, Mihara neither discloses nor suggests "a single Video Buffering Verifier (VBV) calculated for the whole band" as in the present claimed invention.

In fact, unlike the present claimed invention there is no common VBV for the system layer. The video stream at the output of the coder is packetized to give a packetized elementary stream (PES) and these PES are multiplexed to give the transport stream (system layer). A specific VBV buffer is calculated for each video stream, according to the bit rate of Mihara. This bit rate, which is part of the global bit rate, is consequently allocated to each program through a global management.

Furthermore, Wu et al. disclose the use of 8 encoders each utilizing any available compression engine such as the DVxpert to perform the coding (see Wu et al., col. 3, lines 19 – 23). The DVxpert processor is designed for MPEG-2 compression thus making the system MPEG-2 compatible (see Wu et al., col. 1, lines 32-33). As this is an MPEG-2 system, it is well known in the art that each MPEG-2 encoder is provided with a VBV verifier (see ISO/IEC 13818-2, annex C, video buffering verifier). Thus, Wu et al. disclose an HDTV encoder having 8 MPEG-2 compressors each having a VBV wherein a common video buffer is present at the output of these encoders. The common video buffer at the output is a FIFO memory. Therefore, Wu et al. implicitly disclose a VBV for each of the eight compressors as well as a common buffer for all the compressors at the output of the encoders. However, Wu et al. neither disclose nor suggest "each encoder of the band taking into account the same Video Buffering Verifier (VBV) calculated for the whole band" as in the present claimed invention. Thus, it is clear that Wu et al. neither disclose nor suggest a global VBV buffer as in the present invention.

On the other hand, as discussed above Mihara discloses the use of a VBV for each coder and that each coding device has a rate controller 23 linked to a buffer memory 17 as shown in Figure 5. A central controller 3 dispatches the bit rates but each coder has its specific rate control, each one using a specific buffer verifier. Thus, similarly to Wu et al., Mihara neither discloses nor suggests global regulation through "a same VBV calculated for the whole band" as in the present claimed invention.

As Wu et al. disclose coding of an image using several coders wherein the decoder decodes all the coded data, and Mihara discloses coding several programs using several coders and statistical multiplexing, wherein the decoder decodes a single program at a time, the technical fields are clearly different. This point is made clear when looking to Figure 17 of Mihara. As shown in Figure 17, a central controller 3 receives the bit rates (Dn) of each image coding device (2-n) to dispatch a bite rate (bit_rate #n) to each device according to a global bit rate. Thus, Applicants respectfully submit that combining this system with the system disclosed by Wu et al. is improper. Specifically, by combing the system as disclosed in Figure 17 of Mihara with the system disclosed in Figure 1 of Wu et al, the result is not the system disclosed by the present claimed invention. Rather, the combination of Mihara with Wu et al. yields a master compression controller (16) (to be compared to controller 3 in Mihara) receiving the bit rates (Dn) of each compressor (120) (to be compared to an image coding device 2-n of Mihara) to dispatch a bit rate (bit_rate # n) to each compressor according to a global bit rate. This means that the VBV of each compressor would be consequently calculated according to the bit rate allocated to the compressor. This calculation does NOT take into account the filling of the other VBV's as in the present invention. This is wholly unlike the present invention wherein the same VBV for all compressors has a memory capacity which is the sum of the individual capacities. (see present specification, page 4).

Additionally, the system disclose by the present invention is not obvious even if the system disclosed in Figure 1 by Wu et al. is combined with the system disclosed by Mihara in Figure 17. A combination in this manner results in image coding devices, each with a specific VBV. As the coder corresponds to a specific program, it is inappropriate to use a common VBV buffer for all the programs on the coder side because the buffer of the decoder is filled with data corresponding to only one program.

Therefore, combing the systems as taught by Mihara (VBV's specific to each coder) and Wu et al. (MPEG compressed video data on the bus coming from the compressors) results in a system having a VBV specific to each encoder which is wholly unlike the system of the present claimed invention which discloses "a rate control is implemented at a band level as a function of a present bit rate for the band, each encoder of the band taking into account a same Video Buffering Verifier (VBV) calculated for the whole band."

Independent claim7 include similar limitations as claim 1 and thus, all arguments discussed above with respect to claim 1 are applicable to claim 7.

Consequently, it is submitted that claims 1 and 7 are patentable under 35 USC 103(a) and reversal of its rejection is respectfully requested. As claim 8 is dependent on independent claim 7, a reversal of the rejection of this claim is further respectfully requested.

Therefore, it is respectfully submitted that claims 1, 7 and 8 are patentable under 35 U.S.C. 103 (a) and reversal of the rejections of these claims is respectfully requested.

2. **Rejection of claims 2 – 5 and 9 as being unpatentable under 35 USC 103(a) over Wu et al. (U.S. 6,573,945) in view of Mihara (U.S. 6,229,849) and further in view of Blawat et al. (U.S. 6,198,878).**

Reversal of the Final Rejection (hereinafter termed "rejection") of claims 2 – 5 and 9 as being unpatentable under 35 USC 103(a) over Wu et al. in view of Mihara and further in view of Blawat et al, is respectfully requested. The rejection makes the following crucial errors in interpreting the cited reference.

A. The rejection erroneously states that claims 2 – 5 and 9 are unpatentable over (U.S. Patent 6,573,945) issued to Wu et al. in view of U.S. Patent 6,229,849 issued to Mihara and further in view U.S. Patent 6,198,878 issued to Blawat et al. under 35 U.S.C. 103(a).

**ISSUES**

A principal issue here is whether or not Wu et al., Mihara or Blawat et al. disclose or suggest a rate control being implemented at a band level as a function of a preset bit rate for the band wherein each encoder of the band taking into account a same Video Buffering Verifier (VBV) calculated for the whole band as alleged in the rejection

As discussed above, Wu et al. and Mihara neither disclose nor suggest a single Video Buffering Verifier (VBV) calculated for the whole band" as in the present claimed invention.

Blawat et al. disclose the use of a VBV buffer for controlling the output bit rate. The process of Blawat et al. deals with the use of only one coder and consequently Blawat et al. neither disclose nor suggest a global rate control as in the present claimed invention.

As the coding of the image of the present claimed invention is of the MPEG type, if several coders are used to code different parts of the image, each coder would operate separately through a feedback loop acting on the quantization step to control its output rate.

If the buffer size of the decoder is, for example, 8 MB and if there are three panels constituting a band and the image, it is respectfully submitted that the man skilled in the art would choose a separate coder for each panel, a separate rate control for each panel, a separate VBV buffer for each coder and a separate control algorithm for each VBV, giving each of the three virtual buffers a size of 8/3 MB. The main idea of the present claimed invention is the implementation of the rate control algorithm of each coder at a band level by using a single virtual buffering verifier (VBV) calculated for the whole band. This global VBV buffer takes into account global data, i.e. data concerning the whole band. Such is neither disclosed nor suggested by either Andrew et al. or Blawat et al.

Instead of having constraints specific to each coder, an only constraint of the present claimed invention exists for the whole band, the one relating to the single Video Buffer Verifier. The constraint for the band is consecutively reduced as it is no longer an addition of constraints of each coder dedicated to the band (overflow can be compensated by underflow...) allowing improvement of the coding image quality.

The problem concerning the use of several VBV's is not raised in Blawat et al. In conclusion, none of the cited documents, taken separately or combined, discloses or suggests the invention as claimed

Consequently, it is submitted that as claims 1 and 7 are patentable over Wu et al. in view of Mihara and in further view of Blawat et al., a reversal of the rejection is respectfully requested. As claims 2 – 5 are dependent upon claim 1 and claim 9 is dependent upon claim 7, it is respectfully requested the claims 2 – 5 and 9 are also patentable over Wu et al. in view of Mihara in further view of Blawat et al. for the same reasons as claims 1 and 7 and a reversal of the rejection is further respectfully requested.

Therefore, it is respectfully submitted that claims 2 – 5 and 9 are patentable under 35 U.S.C. 103(a) a reversal of the rejections of these claims is respectfully requested.

## IX Conclusion

Neither Wu et al., Mihara nor Blawat et al. disclose a method and system including a rate control implemented at a band level as a function of a present bit rate for the band wherein each encoder of the band takes into account a same Vide Buffering Verifier (VBV) calculated for the whole band. Accordingly it is respectfully submitted that the rejection of Claims 1– 9 should be reversed.

Respectfully submitted,
Xavier Ducloux et al.

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APPENDIX I

APPEALED CLAIMS

1. (Previously Presented) Process for the MPEG type video coding of high definition images, an image being split into panels, an encoder being assigned to each panel, two or more panels constituting, over the length of the image, a horizontal band of the image, wherein a rate control is implemented at a band level as a function of a preset bit rate for the band, each encoder of the band taking into account a same Video Buffering Verifier (VBV) calculated for the whole band.

2. (Original) Process according to Claim 1, wherein the preset bit rate allocated to a horizontal band is dependent on the cost of coding the band relative to the cost of coding a complete image.

3. (Original) Process according to Claim 2, wherein the coding cost is calculated on the basis of a preanalysis of the image.

4. (Original) Process according to Claim 2, wherein the coding cost is calculated on the basis of the cost of coding or complexity of a previous image.

5. (Original) Process according to Claim 2, wherein the preset bit rate for a horizontal band is in part the preset bit rate for the complete image, divided by the number of horizontal bands, in part a dynamic allocation of the preset bit rate for the complete image, dependent on the complexity of the band.

6. (Original) Process according to Claim 2, wherein the preset bit rate of a horizontal band is equal to:

$$Di = \left( p\frac{Xi}{X} + (1-p)\frac{n}{N} \right) D$$

where : Di is the bit rate of the horizontal band,

D is the bit rate for the global image,

Xi is the complexity of the horizontal band,

X is the total complexity of the image,

n is the number of panels per horizontal band,

N is the total number of panels in the image,

p is the percentage of bit rate assigned to dynamic allocation relative to the global bit rate.

7. (Previously Presented) Device for the video coding of high resolution images, an image being divided into several horizontal bands and the bands into panels, the device comprising a set of encoders of MPEG type, each encoder being dedicated to the coding of a panel, wherein each encoder is coupled to another encoder of the same band for exchanging coding data in order to implement a global rate control at a band level through a same Video Buffering Verifier (VBV) for said band.

8. (Previously Presented) Device according to Claim 7, comprising a multiplexing bus linking the encoders for the transmission of the transport streams of the encoders, wherein said coding data are exchanged over said multiplexing bus.

9. (Previously Presented) Device according to Claim 7, wherein each encoder comprises means for calculating a dynamic allocation, the bit rate allotted to the set of encoders of a band being calculated on the basis of the complexity of coding the band relative to the complexity of coding the complete image.

## APPENDIX II

TABLE OF CASES

1. *In re Fine*, 5 USPQ 2d 1600, (Fed Cir. 1988)

2. *ACS Hospital Systems Inc v. Montefiore Hospital*, 221 USPQ 929,933 (Fed. Cir. 1984)

3. *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (CCPA 1966)

4. *Uniroya, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed.Cir. 1988), *cert. denied*, 488 U.S. 825 (1988)

5. *Ashland Oil Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 28, 293, 227 USPQ 657, 664 (Fed.Cir. 1985), *cert. denied,* 475 U.S. 1017 (1986)

## APPENDIX III

LIST OF REFERENCES

| **U.S. Pat. No.** | **Issued Date** | **102(e) Date** | **Inventors** |
|---|---|---|---|
| 6,573,945 | June 3, 2003 | | Wu et al. |
| 6,229,849 | May 8, 2001 | | Mihara |
| 6,198,878 | March 6, 2001 | | Blawat et al. |

# BRIEF ON APPEAL

## TABLE OF CONTENTS

PTO/SB/17 (10-03)
Approved for use through 07/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

# FEE TRANSMITTAL for FY 2004



*Effective 10/01/2003. Patent fees are subject to annual revision.*

☐ Applicant claims small entity status. See 37 CFR 1.27

**TOTAL AMOUNT OF PAYMENT** ($) 330



| *Complete if Known* | |
|---|---|
| Application Number | 09/819,554 |
| Filing Date | March 28, 2001 |
| First Named Inventor | Xavier Ducloux |
| Examiner Name | Behrooz M. Senfi |
| Art Unit | 2613 |
| Attorney Docket No. | PF010030 |

## METHOD OF PAYMENT *(check all that apply)*

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

Deposit Account Number: 07-0832

Deposit Account Name: Thomson Licensing Inc.

**The Director is authorized to:** *(check all that apply)*

☒ Charge fee(s) indicated below ☒ Credit any overpayments

☒ Charge any additional fee(s) during the pendency of this application

☐ Charge fee(s) indicated below, **except for the filing fee** to the above-identified deposit account.

## FEE CALCULATION

### 1. BASIC FILING FEE

| Large Entity Fee Code | Large Entity Fee ($) | Small Entity Fee Code | Small Entity Fee ($) | Fee Description | Fee Paid |
|---|---|---|---|---|---|
| 1001 | 770 | 2001 | 385 | Utility filing fee | |
| 1002 | 340 | 2002 | 170 | Design filing fee | |
| 1003 | 530 | 2003 | 265 | Plant filing fee | |
| 1004 | 770 | 2004 | 385 | Reissue filing fee | |
| 1005 | 160 | 2005 | 80 | Provisional filling fee | |

**SUBTOTAL (1)** ($) 0

### 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

| | | | Extra Claims | | Fee from below | | Fee Paid |
|---|---|---|---|---|---|---|---|
| Total Claims | | -20 ** = | 0 | X | | = | 0 |
| Independent Claims | | -3 ** = | 0 | X | | = | 0 |
| Multiple Dependent | | | | X | | = | 0 |

| Large Entity Fee Code | Large Entity Fee ($) | Small Entity Fee Code | Small Entity Fee ($) | Fee Description |
|---|---|---|---|---|
| 1202 | 18 | 2202 | 9 | Claims in excess of 20 |
| 1201 | 86 | 2201 | 43 | Independent claims in excess of 3 |
| 1203 | 290 | 2203 | 145 | Multiple dependent claim, if not paid |
| 1204 | 86 | 2204 | 43 | ** Reissue independent claims over original patent |
| 1205 | 18 | 2205 | 9 | ** Reissue claims in excess of 20 and over original patent |

**SUBTOTAL (2)** ($) 0

***or number previously paid, if greater; For Reissues, see above*

## FEE CALCULATION (continued)

### 3. ADDITIONAL FEES

| Large Entity Fee Code | Large Entity Fee ($) | Small Entity Fee Code | Small Entity Fee ($) | Fee Description | Fee Paid |
|---|---|---|---|---|---|
| 1051 | 130 | 2051 | 65 | Surcharge - late filing fee or oath | |
| 1052 | 50 | 2052 | 25 | Surcharge - late provisional filing fee or cover sheet. | |
| 1053 | 130 | 1053 | 130 | Non-English specification | |
| 1812 | 2,520 | 1812 | 2,520 | For filing a request for reexamination | |
| 1804 | 920* | 1804 | 920* | Requesting publication of SIR prior to Examiner action | |
| 1805 | 1,840* | 1805 | 1,840* | Requesting publication of SIR after Examiner action | |
| 1251 | 110 | 2251 | 55 | Extension for reply within first month | |
| 1252 | 420 | 2252 | 210 | Extension for reply within second month | |
| 1253 | 950 | 2253 | 475 | Extension for reply within third month | |
| 1254 | 1,480 | 2254 | 740 | Extension for reply within fourth month | |
| 1255 | 2,010 | 2255 | 1,005 | Extension for reply within fifth month | |
| 1401 | 330 | 2401 | 165 | Notice of Appeal | |
| 1402 | 330 | 2402 | 165 | Filing a brief in support of an appeal | 330 |
| 1403 | 290 | 2403 | 145 | Request for oral hearing | |
| 1451 | 1,510 | 1451 | 1,510 | Petition to institute a public use proceeding | |
| 1452 | 110 | 2452 | 55 | Petition to revive – unavoidable | |
| 1453 | 1,330 | 2453 | 665 | Petition to revive – unintentional | |
| 1501 | 1,330 | 2501 | 665 | Utility issue fee (or reissue) | |
| 1502 | 480 | 2502 | 240 | Design issue fee | |
| 1503 | 640 | 2503 | 320 | Plant issue fee | |
| 1460 | 130 | 1460 | 130 | Petitions to the Commissioner | |
| 1807 | 50 | 1807 | 50 | Processing fee under 37 CFR 1.17 (q) | |
| 1806 | 180 | 1806 | 180 | Submission of Information Disclosure Stmt | |
| 8021 | 40 | 8021 | 40 | Recording each patent assignment per property (times number of properties) | |
| 1809 | 770 | 2809 | 385 | Filing a submission after final rejection (37 CFR § 1.129(a)) | |
| 1810 | 770 | 2810 | 385 | For each additional invention to be examined (37 CFR § 1.129(b)) | |
| 1801 | 770 | 2801 | 385 | Request for Continued Examination (RCE) | |
| 1802 | 900 | 1802 | 900 | Request for expedited examination of a design application | |
| | | | | Other fee (specify) ____ | |

*Reduced by Basic Filing Fee Paid **SUBTOTAL (3)** ($) 330

| SUBMITTED BY | | | | Complete *(if applicable)* | |
|---|---|---|---|---|---|
| *Name (Print/Type)* | GUY H. ERIKSEN | *Registration No. (Attorney/Agent)* | 41,736 | *Telephone* | (609) 734-6807 |
| *Signature* | | | | *Date* | May 5, 2004 |

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This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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